

Notice of Allowability

Application No.

10/675,865

Examiner

Callie E. Shosho

Applicant(s)

MIYABAYASHI, TOSHIYUKI

Art Unit

1714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed 3/13/07 and telephonic interview conducted 3/29/07.
2. ☒ The allowed claim(s) is/are 1-31.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413), Paper No./Mail Date <u>3/29/07</u> . |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |

Examiner's Amendment

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

(1) Claim 6, line 2, after "group" and before "of", insert "on the surface".

(2) Claim 6, line 4, after "group" and before "a phenyl group", insert ",".

(3) Claim 7, line 2, after "group" and before "of", insert "on the surface".

(4) Claim 13, line 9, after "group" and before "the", delete "and/or" and insert "and optionally".

(5) Claim 14, line 11, after "group" and before "the", delete "and/or" and insert "and optionally".

2. Authorization for this examiner's amendment was given in a telephone interview with Clifford Mass on 3/29/07.

Statement of Reasons of Allowance

3. The present claims are allowable over the “closest” prior art Hayashi et al. (U.S. 5,415,964), WO 2001/96483, Vincent et al. (U.S. 2004/0157956), Nakamura et al. (U.S. 2003/0195274), and Mishina et al. (U.S. 6,511,534) for the following reasons:

Hayashi et al. disclose pigment coated with polymer, i.e. microencapsulated pigment, wherein the polymer is obtained from hydrophilic monomer including cationic monomer such as 2-hydroxy-3-methacryloyloxypropyltrimethyl ammonium salt, i.e. corresponding to cationically polymerizable surface active agent, ionic monomer, hydrophobic monomer, and crosslinkable monomer. However, there is no disclosure or suggestion in Hayashi et al. of anionically polymerizable surface active agent as required in all the present claims and therefore no disclosure or suggestion in Hayashi et al. that the polymer comprises a repeating structural unit derived from a cationically polymerizable surface active agent and a repeating structural unit derived from an anionically polymerizable surface active agent as required in present claim 1. Thus, there is also no disclosure or suggestion in Hayashi et al. of microencapsulated pigment comprising pigment particles coated with a polymer by polymerizing a cationically polymerizable surface active agent with an anionically polymerizable surface active agent in an aqueous dispersion as required in present claim 2 or process for producing microencapsulated pigment by coating pigment with polymer which comprises adding a cationically polymerizable surface active agent to aqueous dispersion of pigment, adding thereto an anionically polymerizable surface active agent, and then emulsion polymerizing as required in each of claims 11 and 12. Further, there is no disclosure or suggestion in Hayashi et al. that the pigment has anionic group on its surface as required in all the present claims.

WO 2001/96483 discloses ink jet ink comprising pigment enveloped in polymer, i.e. microencapsulated pigment, wherein the polymer is a copolymer of polymerizable group-having dispersant, i.e. polymerizable surface active agent, crosslinking monomer, and hydrophobic monomer. However, while WO 2001/96483 discloses that the polymerizable surface active agent includes those having a cationic group and those having an anionic group, there is no disclosure or suggestion in WO 2001/96483 that the polymer coating the pigment comprises a repeating structural unit derived from a cationically polymerizable surface active agent and a repeating structural unit derived from an anionically polymerizable surface active agent as required in present claim 1. There is also no disclosure or suggestion in WO 2001/96483 of microencapsulated pigment comprising pigment particles coated with a polymer by polymerizing a cationically polymerizable surface active agent with an anionically polymerizable surface active agent in an aqueous dispersion as required in present claim 2 and no disclosure or suggestion of process for producing microencapsulated pigment by coating pigment with polymer which comprises adding a cationically polymerizable surface active agent to aqueous dispersion of pigment, adding thereto an anionically polymerizable surface active agent, and then emulsion polymerizing as required in each of claims 11 and 12. Further, there is no disclosure or suggestion in WO 2001/96483 that the pigment has anionic group on its surface as required in all the present claims.

Vincent et al. disclose ink jet ink comprising latex encapsulated pigment wherein a reactive surfactant, i.e. polymerizable surface active agent, is attached to the latex. However, there is no disclosure or suggestion in Vincent et al. that the latex comprises a repeating structural unit derived from a cationically polymerizable surface active agent and a repeating

structural unit derived from an anionically polymerizable surface active agent as required in present claim 1. There is also no disclosure or suggestion in Vincent et al. of microencapsulated pigment comprising pigment particles coated with a polymer by polymerizing a cationically polymerizable surface active agent with an anionically polymerizable surface active agent in an aqueous dispersion as required in present claim 2 and no disclosure or suggestion of process for producing microencapsulated pigment by coating pigment with polymer which comprises adding a cationically polymerizable surface active agent to aqueous dispersion of pigment, adding thereto an anionically polymerizable surface active agent, and then emulsion polymerizing as required in each of claims 11 and 12. Further, while Vincent et al. disclose that the pigment is self-dispersing pigment having chemical group attached to the surface, there is no disclosure that the chemical group is anionic group as required in all the present claims.

Nakamura et al. disclose pigment coated with polymer, i.e. microencapsulated pigment, wherein the pigment is surface treated with anionic group and the polymer is obtained from anionically polymerizable surface active agent. However, there is no disclosure or suggestion in Nakamura et al. of cationically polymerizable surface active agent as required in all the present claims and therefore no disclosure or suggestion in Nakamura et al. that the polymer comprises a repeating structural unit derived from a cationically polymerizable surface active agent and a repeating structural unit derived from an anionically polymerizable surface active agent as required in present claim 1. Thus, there is also no disclosure or suggestion in Nakamura et al. of microencapsulated pigment comprising pigment particles coated with a polymer by polymerizing a cationically polymerizable surface active agent with an anionically polymerizable surface active agent in an aqueous dispersion as required in present claim 2 or process for producing

microencapsulated pigment by coating pigment with polymer which comprises adding a cationically polymerizable surface active agent to aqueous dispersion of pigment, adding thereto an anionically polymerizable surface active agent, and then emulsion polymerizing as required in each of claims 11 and 12.

Mishina et al. disclose microencapsulated self-dispersing pigment, i.e. pigment coated with polymer, wherein the pigment comprises anionic group on its surface. However, there is no disclosure or suggestion in Mishina et al. of cationically polymerizable surface active agent and anionically polymerizable surface active agent as required in all the present claims.

Thus, it is clear that Hayashi et al., WO 2001/96483, Vincent et al., Nakamura et al., and Mishina et al., either alone or in combination, do not disclose the present invention.

In light of the above, the present claims are passed to issue.

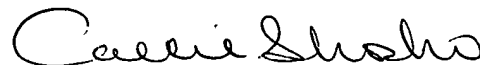
Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Callie E. Shosho whose telephone number is 571-272-1123. The examiner can normally be reached on Monday-Friday (6:30-4:00) Alternate Fridays Off.

Art Unit: 1714

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Callie E. Shosho
Primary Examiner
Art Unit 1714

CS
3/29/07